

STATEMENT UNDER ARTICLE 19(1) OF THE TREATY

Claim 1 has clarified that, in the thermoset optical-purpose adhesive composed mainly of a primary agent and a curing agent and has a visible-ray transmittance of 90% or more after heat curing under conditions of a layer thickness that is enough for the adhesive to function as an adhesive, the primary agent comprises a main component constituted of a silane modified epoxy resin whose active-radical moieties other than epoxy radicals have been inactivated in part or in entirety by the aid of a metallic soap and to at least one epoxy radical of which a silane coupling agent has been attached, and the curing agent comprises a main component constituted of an amine type compound or an amide type compound.

In each of the references cited, there is no disclosure at all as to the adhesive in which, in the thermoset optical-purpose adhesive composed mainly of a primary agent and a curing agent, the primary agent comprises a main component constituted of a silane modified epoxy resin whose active-radical moieties other than epoxy radicals have been inactivated in part or in entirety by the aid of a metallic soap and to at least one epoxy radical of which a silane

coupling agent has been attached.

The thermoset optical-purpose adhesive according to the present invention provides, after curing, the 5 cured products with superior resistance to heat and moisture and superior transparency. Hence, where this adhesive is used in optical isolator elements and optical isolators, it has the effect of making the optical isolator elements and permanent magnets not 10 easily come separate from the holder because of deterioration of the adhesive and making optical deterioration not easily occur because of peeling of the Faraday rotator and polarizers.

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Aratt v2

Claims

1. A thermoset optical-purpose adhesive comprising a mixed adhesive which is mainly composed 5 of a primary agent and a curing agent, and is characterized by having a visible-ray transmittance of 90% or more after heat curing under conditions of a layer thickness that is enough for the adhesive to function as an adhesive.

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2. The thermoset optical-purpose adhesive according to claim 1, wherein;
said primary agent comprises a main component constituted of a silane modified epoxy resin whose 15 active-radical moieties other than epoxy radicals have been inactivated in part or in entirety by the aid of a metallic soap and to at least one epoxy radical of which a silane coupling agent has been attached; and
said curing agent comprises a main component 20 constituted of an amine type compound or an amide type compound.

3. The thermoset optical-purpose adhesive according to claim 2, wherein said amine type compound 25 or amide type compound constituting the main component of said curing agent has been made into a latent amine

addition product upon reaction with the epoxy resin.

4. The thermoset optical-purpose adhesive according to claim 2 or 3, wherein the compounding 5 proportion of said curing agent to 100 parts by weight of said primary agent epoxy resin is set within the range of from 20 parts by weight to 45 parts by weight.

5. An optical isolator element constituted 10 mainly of a Faraday rotator, and a first polarizer and a second polarizer which are respectively disposed on both sides of the Faraday rotator, wherein;

 said Faraday rotator, said first polarizer and said second polarizer are joined at their interfaces 15 by means of the thermoset optical-purpose adhesive according to any one of claims 1 to 4.

6. An optical isolator comprising an optical isolator element and a permanent magnet which brings 20 into saturation magnetization a Faraday rotator of this optical isolator element; the optical isolator element and the permanent magnet being fastened to a holder; wherein;

 said optical isolator element and said permanent 25 magnet are fastened by bonding to the holder by means of the thermoset optical-purpose adhesive according to

any one of claims 1 to 4.